

Docket No.: R.20-11-003

Exhibit No.: \_\_\_\_\_

Date: September 10, 2021

Witness: Ed Burgess

**REPLY TESTIMONY OF ED BURGESS  
ON BEHALF OF THE VEHICLE GRID INTEGRATION COUNCIL**

1 **Q: Please state your name, title, and business address.**

2 **A:** My name is Ed Burgess. I am a Senior Director at Strategen Consulting and the Senior Policy Director for  
3 the Vehicle Grid Integration Council (VGIC). My business address is 2150 Allston Way, Suite 400, Berkeley,  
4 California 94704.

5 **Q: On whose behalf are you testifying?**

6 **A:** I am testifying on behalf of the Vehicle Grid Integration Council (VGIC).

7 **Q: What is VGIC?**

8 **A:** VGIC is a 501(c)6 membership-based trade association committed to advancing the role of electric vehicles  
9 (EV) and vehicle-grid integration (VGI) through policy development, education, outreach, and research. VGIC  
10 supports the transition to a decarbonized transportation and electric sector by ensuring the value from EV  
11 deployments and flexible EV charging and discharging is recognized and compensated in support of achieving a  
12 more reliable, affordable, and efficient electric grid.

13 **Q: Did you submit opening testimony in this proceeding?**

14 **A:** Yes.

15 **Q: Have you reviewed the opening testimonies of other parties in this proceeding that you wish to reply  
16 to?**

17 **A:** Yes.

18 **Q: What is the purpose of your reply testimony?**

19 **A:** The purpose of this reply testimony is to provide my response to the testimonies and proposals submitted by  
20 other parties, including California Solar & Storage Association (CALSSA), ev.energy, Joint DR Parties, Marin  
21 Clean Energy (MCE), Pacific Gas and Electric Company (PG&E), Peninsula Clean Energy (PCE), and  
22 Southern California Edison Company (SCE), on various EV/VGI solutions that could be pursued by the  
23 Commission to support grid reliability in California and meet the Summer 2022 and 2023 emergency reliability  
24 needs. Specifically, we respond to testimony from other parties on the analysis of need, design, and structure of  
25 the EV/VGI Aggregation Pilot and party proposals for other new EV/VGI measures.

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1 **I. The EV/VGI Aggregation Pilot is Necessary and Appropriate**

2 **Q: In Opening Testimony, SCE states the “EV/VGI Aggregation Pilot would not provide system relief in**  
3 **2022 in light of limited/no MW potential and is unnecessary in light of other participation opportunities**  
4 **currently open to EV resources.”<sup>1</sup> Do you agree?**

5 A. No. SCE’s testimony related to the EV/VGI aggregation pilot is erroneous in several respects. First, it  
6 assumes that the EV/VGI Aggregation Pilot is designed solely to target bidirectional EV/EVSE in its service  
7 territory. SCE cites the numbers of bidirectional charging stations that are installed, have pending  
8 interconnection applications, and expressed interest in Emergency Load Reduction Program (ELRP) so far, but  
9 offers no data on the number of EVs in SCE’s service territory, let alone the number of potential aggregators  
10 that offer unidirectional “V1G” services in its service territory.<sup>2</sup> While VGIC supports the inclusion of  
11 bidirectional resources in the EV/VGI Aggregation Pilot, we note this is not the distinguishing feature of the  
12 EV/VGI Aggregation Pilot. The distinguishing feature of the EV/VGI Aggregation Pilot is the development of a  
13 reliable and accessible pathway for aggregators to leverage EVs, whether through unidirectional or bidirectional  
14 configurations. The staff proposal clearly states its focus on aggregators that use “networks of V1G or bi-  
15 directionally capable charging stations,”<sup>3</sup> (emphasis added). VGIC believes SCE’s testimony regarding the  
16 EV/VGI aggregation pilot may be based on a misinterpretation of the staff concept, and consideration of SCE’s  
17 opposition may distract from the critical opportunity to leverage EVs for reliability through this pilot. As noted  
18 in opening testimony, VGIC’s analysis shows up to 247 MW of net peak load reduction could be achieved from  
19 V1G alone, assuming a modest 5% participation rate.

20 **Q: Regardless of the significant potential for V1G, do SCE’s claims about V2G charging compensation**  
21 **have any relevance in the context of ELRP?**

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25 <sup>1</sup> Direct Testimony of Southern California Edison Company – Phase 2 at 68.

26 <sup>2</sup> Direct Testimony of Southern California Edison Company – Phase 2 at 68.

27 <sup>3</sup> Brian Stevens. *Email Ruling Issuing Commission Developed Staff Concepts Proposal*  
28 *Document and Seeking Comment in Opening Testimony Due September 1, 2021*. Rulemaking 20-11-003.  
August 16, 2021. Page 10.

1 A: No. As it relates to bidirectional charging, SCE further states that “V2G charging applications represents a  
2 type of service that is neither entirely retail nor entirely wholesale,” and discusses the need to work through  
3 these complex issues before leveraging the “V2G charging application.”<sup>4</sup> However, this appears to be a red  
4 herring designed to overly complicate the issue at hand. The currently effective ELRP program rules *already*  
5 provide compensation for exports provided by distributed energy resources (DERs) participating in Group A.3.  
6 As VGIC understands it, the EV/VGI Aggregation Pilot would be established as a modification to this existing  
7 ELRP program framework, and therefore the need to sort through the interaction of retail and wholesale  
8 participation is irrelevant in the context of the ELRP. The EV/VGI Aggregation Pilot should be viewed as  
9 merely an extension of the existing pathway for compensating exports from individual Group A.3 DERs to  
10 aggregations of exporting bidirectional chargers, as well as non-exporting bidirectional chargers (i.e., vehicle to  
11 building or V2B) and unidirectional chargers that reduce net peak load.

12 **Q. SCE also states that “it is also worth noting that as of September 1, 2021, SCE has received no interest**  
13 **from EV aggregators in ELRP participation under the one-way charging option, let alone a two-way**  
14 **charging option.”<sup>5</sup> Do you think this constitutes evidence that there wouldn’t be interest in the newly**  
15 **proposed EV/VGI Aggregation Pilot?**

16 A: No. The proposed EV/VGI Aggregation Pilot has key important differences from the initial “Phase 1” ELPR  
17 program that I believe may attract substantially more EV aggregator interest. For example, as noted in my  
18 opening testimony and by several other parties in this proceeding, a critical barrier to EV participation in  
19 conventional load reduction programs is the challenge of measuring EV load reduction versus a “baseline” for  
20 the purposes of settlement. I believe the EV/VGI Aggregation Pilot could effectively address this barrier by  
21 allowing for the virtual pairing of separately metered EV load with other customer load. Additionally, even for  
22 EV loads that are comingled, compensation for load reduction is elusive due to the lack of submetering options.  
23 By implementing EV- or EV supply equipment (EVSE)-based measurement, the EV/VGI Aggregation Pilot can  
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26 <sup>4</sup> Direct Testimony of Southern California Edison Company – Phase 2 at 69.

27 <sup>5</sup> Direct Testimony of Southern California Edison Company – Phase 2 at 68.

1 overcome this barrier as well and incentivize ILR from EV load that is currently comingled with site load. By  
2 addressing these barriers, as well as increasing the ELRP compensation from \$1/kWh to \$2/kWh and  
3 guaranteeing 30 hours of dispatch, I believe the EV/VGI Aggregation Pilot could attract EV participation in a  
4 way that the initial Phase 1 ELRP was unable to.

5 **Q. Do all the investor-owned utilities (IOUs) share SCE’s opposition to the EV/VGI Aggregation Pilot?**

6 A. No. PG&E supports the pilot, although it also states that a new participation category will need to be created  
7 for aggregators, since they do not currently qualify under ELRP.<sup>6</sup> VGIC agrees with PG&E’s assessment that a  
8 new option for aggregators will need to be established to facilitate participation and defers to VGIC’s opening  
9 testimony on potential contracting mechanisms and other remaining implementation details.<sup>7</sup>

10 **Q. Do you agree with CALSSA’s assertion that the same rules should apply for EV batteries as stationary**  
11 **storage, “as the two resources employ fundamentally the same technology and stationary storage is more**  
12 **well prepared to deliver strong performance in the short term.”<sup>8</sup>**

13 A. Not exactly. While VGIC believes that stationary and mobile storage are technically similar under certain  
14 circumstances, there are practical realities that make these resources fundamentally different in the current  
15 market. A few of these differences are summarized below:

- 16 • EV owners use their batteries for a different primary use case (i.e., mobility), that is unrelated  
17 to managing electricity consumption.
- 18 • VGI-enabled EVs do not receive market transformation support through Self Generation  
19 Incentive Program (SGIP), net energy metering (NEM), or other existing pathways that have  
20 been available for stationary storage customers and/or providers.
- 21 • EVs can be load-only or bidirectional, whereas stationary storage is, by definition,  
22 bidirectional (even if bidirectional means on-site consumption).

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26 <sup>6</sup> Pacific Gas and Electric Company Emergency Reliability Order Instituting Rulemaking  
Errata Testimony at 7-4.

27 <sup>7</sup> Opening Testimony of Ed Burgess on Behalf of the Vehicle Grid Integration Council at 20.

28 <sup>8</sup> Prepared Direct Testimony of the California Solar & Storage Association at 3.

- EV load is often separated from site load as a provision of IOU transportation electrification infrastructure / make-ready incentive programs or other funding and incentives for charger deployment, whereas utility programs for behind the meter stationary storage do not nudge customers toward separating the storage device from site load.

Despite these practical differences, VGIC appreciates CALSSA’s notion that EVs should have access to the same value streams that stationary storage can access, and in general we support a level playing field in the long run. However, this must be balanced with the notion that it may be beneficial in the early days of newer technologies (i.e., EVs with VGI capabilities) to support market transformation.

## **II. The EV/VGI Aggregation Pilot 30 Hour Dispatch Structure is Appropriate to Support Market Transformation**

### **Q. How did the IOUs react to the proposed 30-hour minimum dispatch requirement in the EV/VGI Aggregation Pilot?**

A. In Opening Testimony, PG&E states that it does not support the 30 hour per season dispatch carveout for VGI resources.<sup>9</sup> PG&E states that “mandating IOUs to force dispatch for at least 30 hours without an emergency does not seem to align with how and why ELRP was developed.”<sup>10</sup>

### **Q. Do you agree with this assessment?**

A. No. I believe that the 30-hour minimum is consistent with the intent of the original ELRP program design. While it is certainly possible that the 30-hour minimum could lead to dispatch hours outside of a true “emergency” I believe this is still appropriate for a few reasons. First, having a more consistent and predictable dispatch schedule will help to acclimate EV customers and aggregators to the overall ELRP regime. While a more limited number of hours could be contemplated, this would run a greater risk of failing to deliver MW

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<sup>9</sup> Pacific Gas and Electric Company Emergency Reliability Order Instituting Rulemaking Errata Testimony at 7-4.

<sup>10</sup> Pacific Gas and Electric Company Emergency Reliability Order Instituting Rulemaking Errata Testimony at 7-4.

1 during the true emergency periods since customers and aggregators would have less participation experience  
2 and may opt-out during the critical times. In essence there is significant value in the ability to “train” customers  
3 and aggregators on how the ELRP program functions well in advance of a true emergency. Second, even if  
4 dispatch hours occur outside of a true emergency, they can still be targeted to high value time periods. For  
5 instance, it is possible that CAISO LMP prices during summer peak load hours could approach their maximum  
6 (i.e., \$1000/MWh) even when there is no threat of a true shortage. In these cases, dispatching EVs via ELRP  
7 still has significant value, even if it is not strictly identical to the ELRP compensation rate. Moreover, the  
8 compensation rate would not necessarily reflect any additional value provided to the distribution system since  
9 EVs function as a distributed resource.

10 **Q. What does PG&E say regarding ELRP eligibility for customers participating in NEM and SGIP?**

11 A. PG&E notes that bidirectional vehicles co-located with solar participating in a NEM tariff cannot also  
12 participate in the ELRP program, and that bidirectional vehicles are not eligible to receive incentives under  
13 SGIP.<sup>11</sup>

14 **Q. Do you believe this constitutes a rationale to exclude EVs from greater ELRP participation?**

15 A. No. If anything, this emphasizes the need for ELRP to encourage participation from EVs since they are  
16 largely excluded from other DER incentive programs. For example, VGIC notes that EVSE are also not eligible  
17 to receive incentives under the SGIP. The EV/VGI Aggregation Pilot’s 30-hour dispatch requirement will  
18 provide aggregators with a reliable value stream that can support finance-ability, product development, and  
19 overall market development. As such, VGIC strongly recommends the Commission adopt the 30-hour dispatch  
20 requirement in the EV/VGI Aggregation Pilot as it will critically support market transformation for VGI  
21 aggregators and customers alike.

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27 <sup>11</sup> Pacific Gas and Electric Company Emergency Reliability Order Instituting Rulemaking  
Errata Testimony at 7-6.

1 **III. VGIC agrees with party recommendations to maximize load reduction from the EV/VGI**  
2 **Aggregation Pilot.**

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4 **Q. What other party recommendations were offered related to the EV/VGI Pilot?**

5 **A.** In Opening Testimony, ev.energy details several recommended improvements to the EV/VGI Aggregation  
6 Pilot.<sup>12</sup> These included the following recommendations:

- 7 1. The Energy Division should define “aggregators” with sufficient breadth.  
8 2. The EV/VGI Aggregation Pilot should not require aggregators to integrate directly with CAISO.  
9 3. Program settlement should use baseline methodology informed by counterfactuals rather than  
10 historical data.  
11 4. Telematics and L1/L2 EVSE data should all be considered equally for the purposes of  
12 performance settlement.

13 **Q. Does VGIC generally agree with these recommendations?**

14 **A.** Yes. In addition to these recommendations from ev.energy, VGIC also agrees with the Joint DR Parties’  
15 recommendation to reduce or eliminate interconnection fees in exchange for bidirectional EVSE purchase and  
16 installation.<sup>13</sup> This can help overcome barriers to bidirectional charger deployment and level the playing field  
17 with stationary storage, which has access to SGIP technology incentives to help offset the upfront costs of  
18 system installation and interconnection.

19 **IV. The VGI Programs and Pilots Proposed by Community Choice Aggregators (CCAs) Would**  
20 **Meaningfully Support Reliability**

21 **Q. What have the CCAs proposed regarding VGI Programs and Pilots to support grid reliability?**  
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26 <sup>12</sup> Opening Phase II Prepared Testimony of Joseph Vellone on Behalf of EV.Energy Corp at  
27 7.

28 <sup>13</sup> Phase 2 Opening Prepared Testimony of Joint DR Parties at 4.

1 A. Several CCAs have proposed meaningful programs and pilots including MCE’s proposed \$1.7 million MCE  
2 Sync and PCE’s proposed \$2 million Residential EV Managed Charging program. The CCAs expect these  
3 could result in 2.5 MW and 1 MW, respectfully, during summer 2022.<sup>14</sup>

4 **Q. Does VGIC support the adoption of these programs?**

5 A. Yes. VGIC is generally encouraged by the CCAs’ eagerness to develop their own VGI Programs and Pilots  
6 to support grid reliability. VGIC believes that the lessons learned from these can inform future policies and  
7 program design for both CCAs and IOUs. For these reasons, VGIC also supports PCE’s proposed Residential  
8 and Heavy-Duty Commercial V2B Pilot. In addition, VGIC believes light-duty commercial V2B applications  
9 should be considered, as there may be additional load reductions available for these use cases. Although VGIC  
10 generally supports the creation of these programs, we would be interested to see more details on how PCE and  
11 MCE intend to recover program costs and how this might evolve over the long-term if these programs are  
12 successful.

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14 **V. Conclusion**

15 **Q: Does this conclude your reply testimony?**

16 A: Yes.

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27 <sup>14</sup> Marin Clean Energy Prepared Direct Testimony of Alice Havenar-Daughton in Rulemaking  
20-11-003 at 2-31 *and* Direct Testimony of Rafael Reyes on Behalf of Peninsula Clean Energy at 13.

**Appendix A:**

Declaration in Support of Reply Testimony of Ed Burgess on Behalf  
of the Vehicle Grid Integration Council

**DECLARATION IN SUPPORT OF REPLY TESTIMONY OF ED BURGESS  
ON BEHALF OF THE VEHICLE GRID INTEGRATION COUNCIL**

I, Ed Burgess, am the Senior Policy Director for the Vehicle Grid Integration Council (VGIC). Having worked for VGIC since its founding in 2020, I am currently managing policy and regulatory affairs for VGIC and its 13 member companies. My business address is 2150 Allston Way, Suite 400, Berkeley, CA 94704. I declare under penalty of perjury that the foregoing facts in this document are true and correct.

Executed on September 10, 2021 at Berkeley, California.



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Ed Burgess